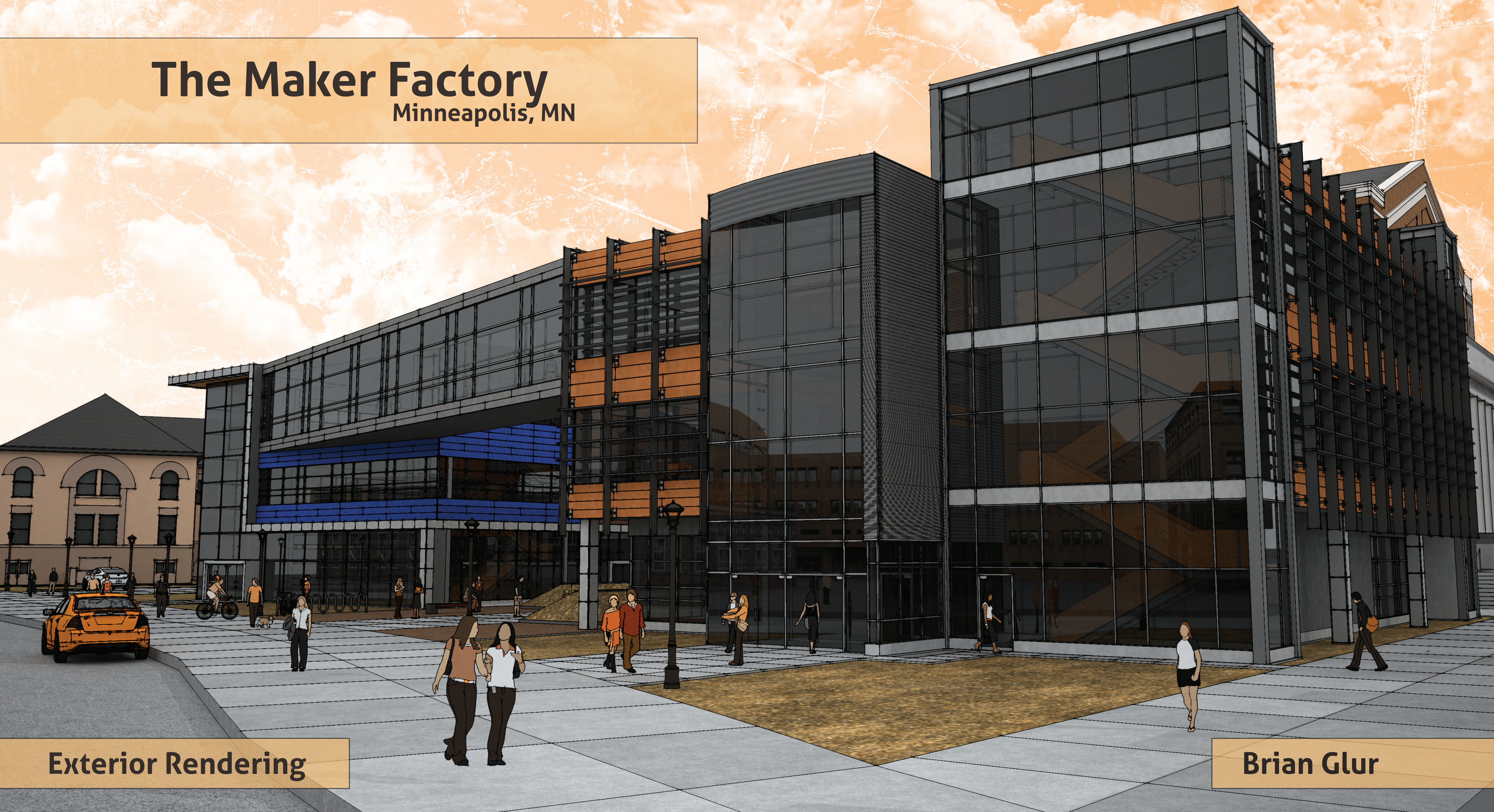


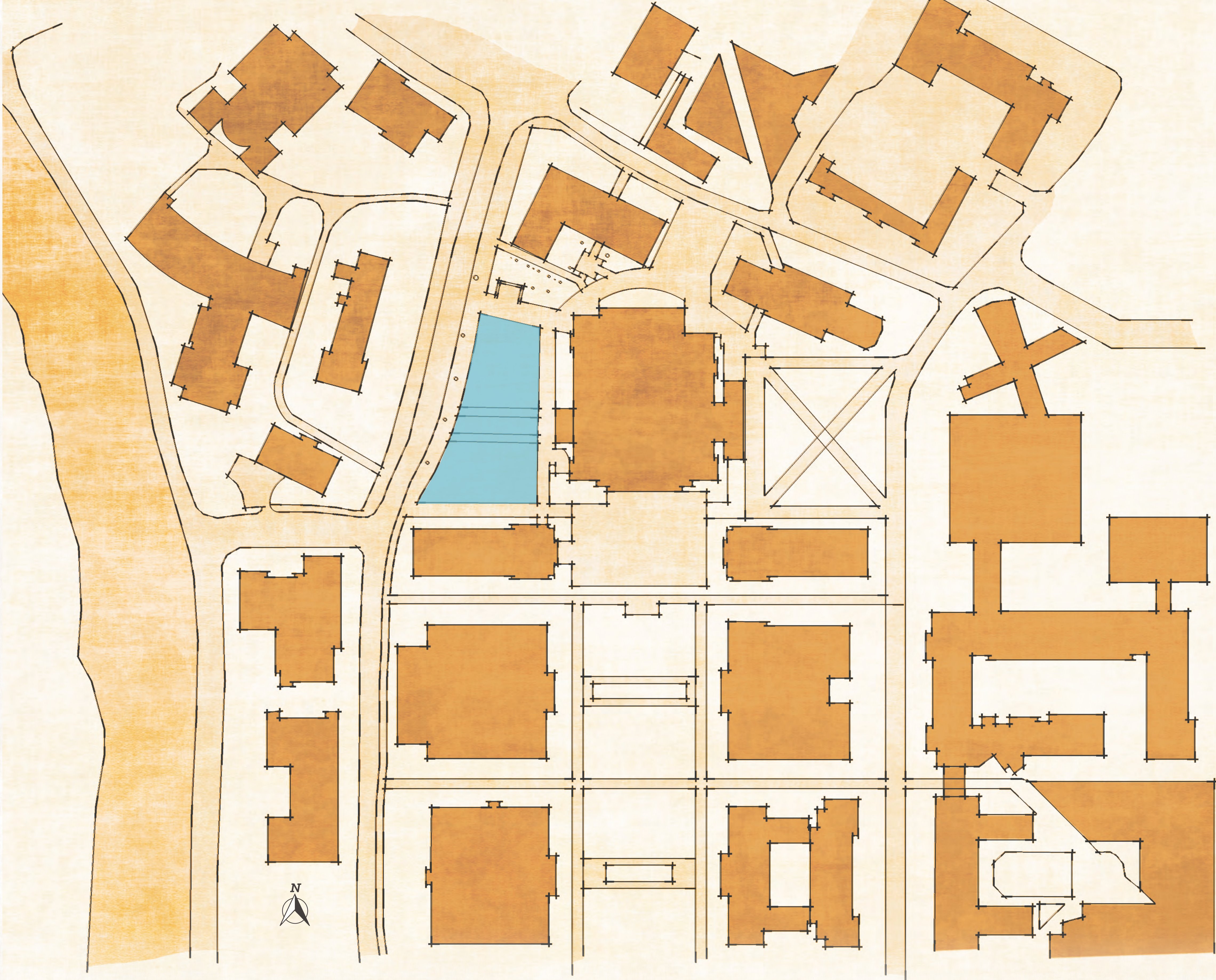
The Maker Factory

Minneapolis, MN

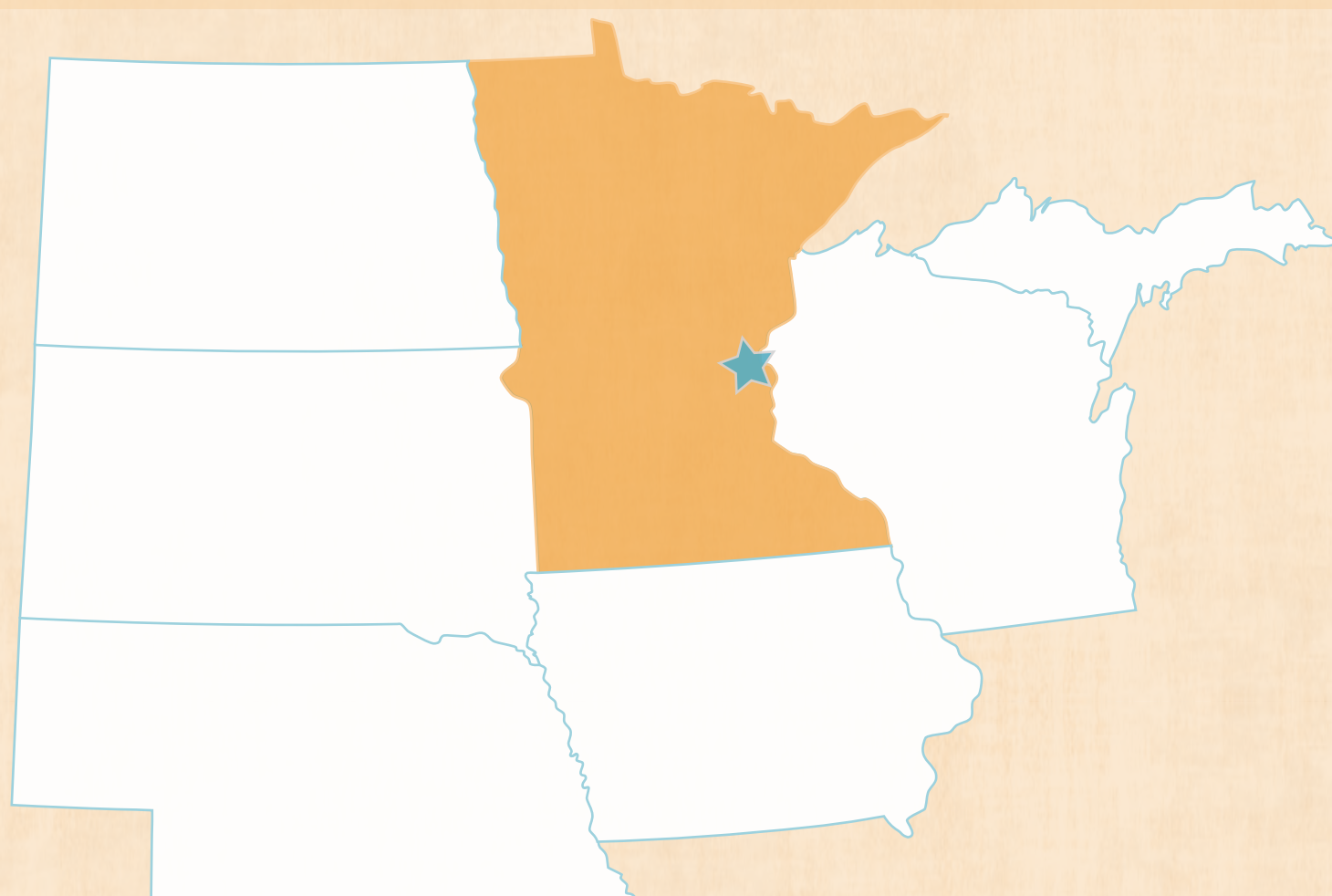


Exterior Rendering

Brian Glur



Project Location



This project is located at 77 Pleasant St. SE on the East Bank of the University of Minnesota’s Minneapolis campus. The site was chosen due to it’s central location just off of the “Northrop Mall,” an area of high pedestrian activity. Previously home to Westbrook Hall, this area is currently bare, side a path running through the center leading to the side entrance of Northrop Auditorium. Surrounding buildings include Northrop Auditorium to the west, Johnston Hall to the south, Nicholson Hall to the north and Scott Hall to the west, across Pleasant Street.

The Twin Cities Metro is home to 3.8 million residents. Minneapolis, Minnesota itself has approximately 400,000 residents and the U of M’s Minneapolis Campus’ current enrollment is 48,000.

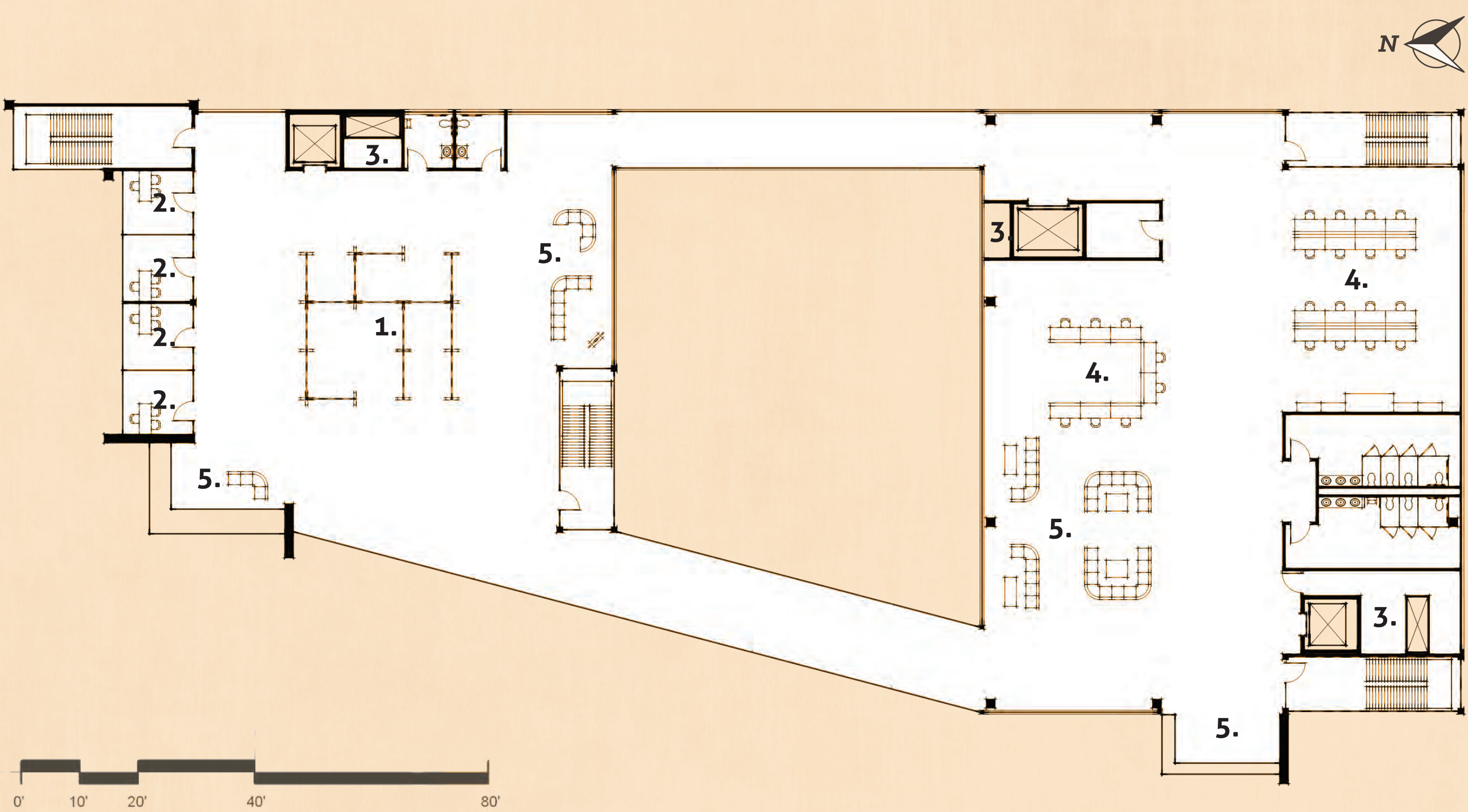
University of Minnesota

Level 3 Plan

Scale: 1/16”= 1’-0”

- 1. Modular Walls
- 2. Offices
- 3. Mechanical
- 4. Studio Space
- 5. Modular Lounges

The third floor is home to studio spaces that can be rearranged to fit the users needs as well as lounge areas with modular seating systems allowing for user customization.

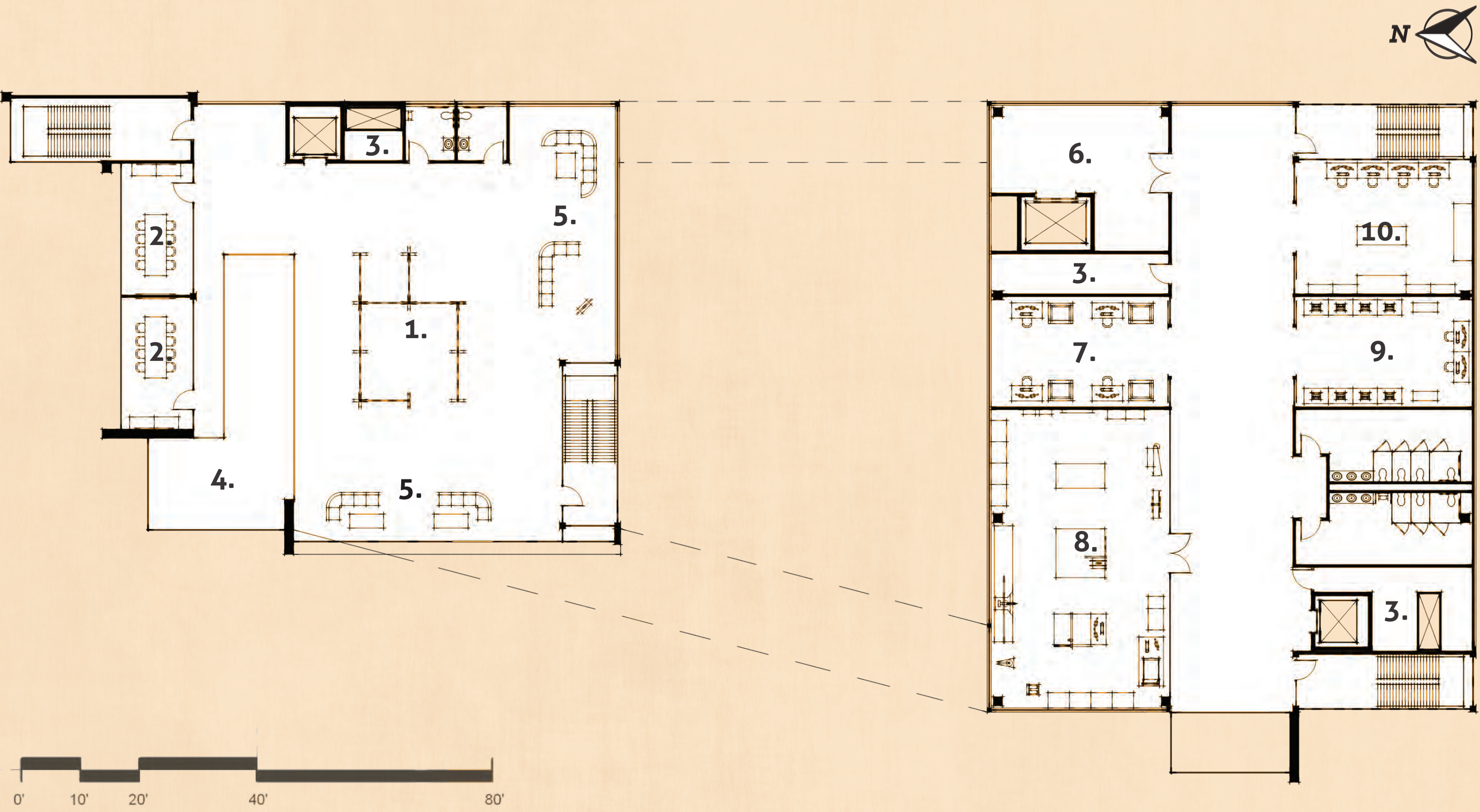


Level 2 Plan

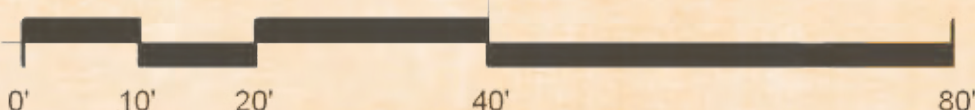
Scale: 1/16”= 1’-0”

- 1. Modular Walls
- 2. Breakout Rooms
- 3. Mechanical
- 4. Open to Below
- 5. Modular Lounges
- 6. Storage/Freight
- 7. Laser Cutting Lab
- 8. Woodshop
- 9. 3D Printing Lab
- 10. Electronics/PC Lab

The second floor features the technology labs, woodshop and social gathering spaces with modular wall and furniture systems for user customization.



Northrop Auditorium



Level 1 Plan

Scale: 1/16”= 1’-0”

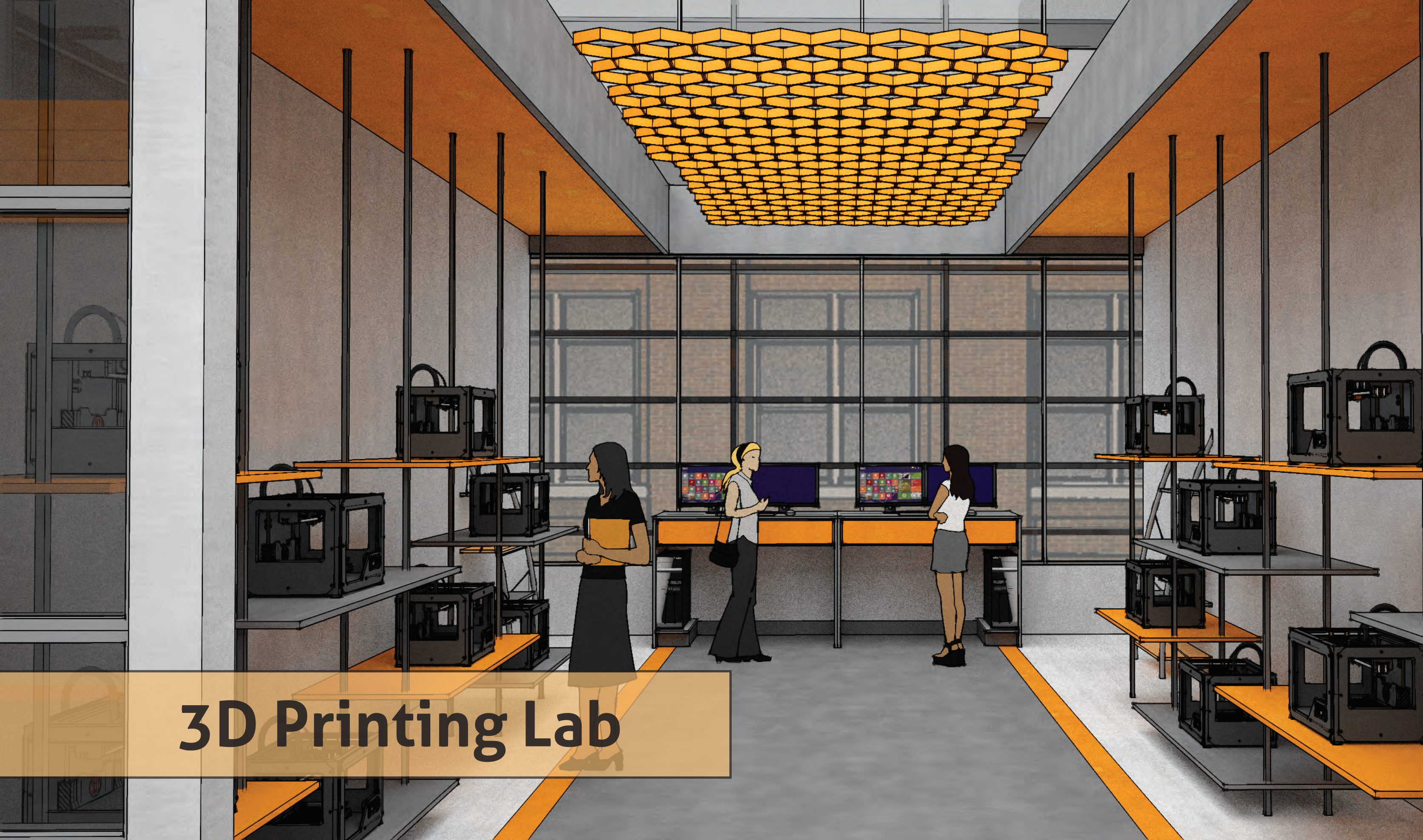
- 1. The Maker Cafe
- 2. Breakout Rooms
- 3. Presentation Space
- 4. Open to Below
- 5. Modular Lounge
- 6. Storage/Freight
- 7. Gallery
- 8. Woodshop
- 9. Conference Room
- 10. Store
- 11. Berms
- 12. Fountain

The first floor features a “Maker Cafe” that mixes 3d printing and mochas.



Pleasant Street

Johnston Hall



3D Printing Lab



Woodshop Rendering

Presentation Space



Exterior Rendering



Thesis Concepts

Creativity, innovation and social interaction are key elements of being human. How can architecture influence these traits and create an environment that not only inspires but allows for expression of these by means of crafting and collaboration? This thesis focuses on creating a large scale Maker Space that aims to introduce maker technology and making to a larger audience, while creating an environment that is social, welcoming and encourages the collaboration of others, from friends to strangers.

This project is divided into two separate buildings. The north building features the Maker Cafe, as well as administration offices, modular social gathering spaces, and classrooms. The south building is home to the technology labs, woodshop, studios, a gallery, large presentation space and material store. The two buildings are connected via skyway with access on the third floor. Between them is a plaza (pictured below) that has large grass berms where occupants can relax, study or socialize in an open green space. The plaza also allows pedestrian traffic to Northrop Auditorium's west entrance.

The "Maker Cafe" (pictured left) is a modern take on the cafe that mixes mochas and making. It puts 3d printing on display as a focal point, aiming to introduce unfamiliar patrons to the technology. People can order a drink along side a 3d print. The cafe features a counter with LED display touchscreens where users can set up prints, view classes or labs available, and surf the web. Staff is also on hand to teach the basics of 3d printing and help set up print jobs. Filament, kits and other materials are available for purchase, as well as your favorite caffinated beverage.

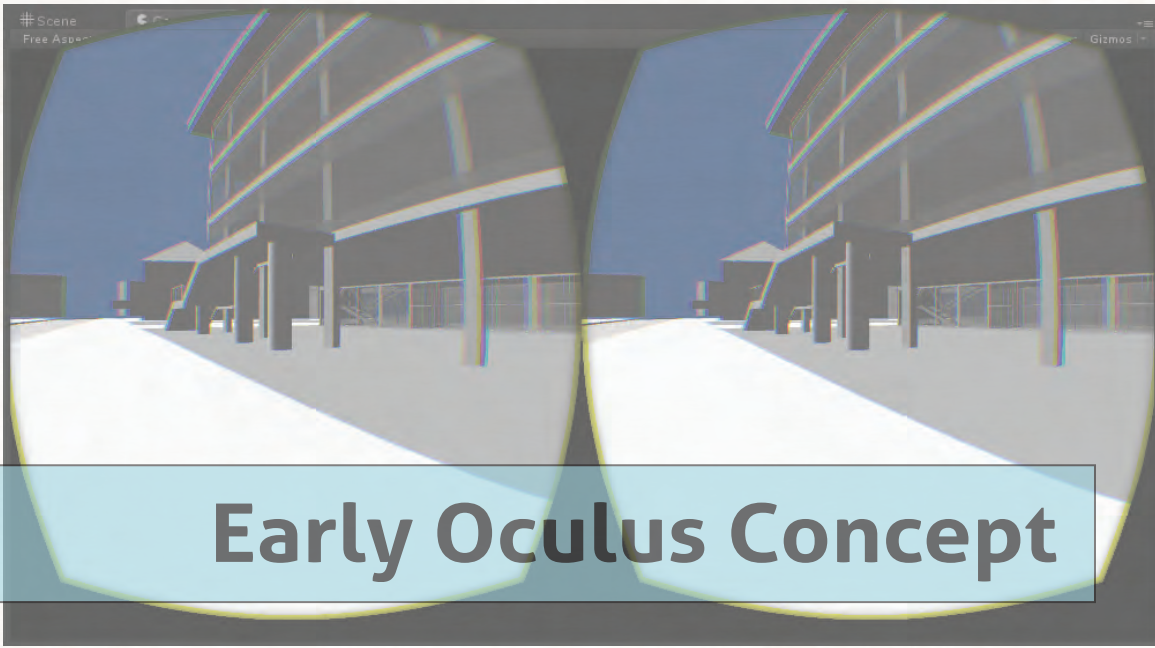


Plaza Rendering



The Maker Cafe

Mixing in new technology, this project utilized the Oculus Rift virtual reality headset as a design tool. This also included creating a work flow from Revit/Sketchup to Unity and into the Oculus. The Oculus allows for a new visualization tool in the field of architecture. Instead of seeing a model on a computer screen, you can visualize the building as if it was in front of you. Being able to view the site and concepts in this format influenced scaling, form and spatial changes that followed through to the final design.

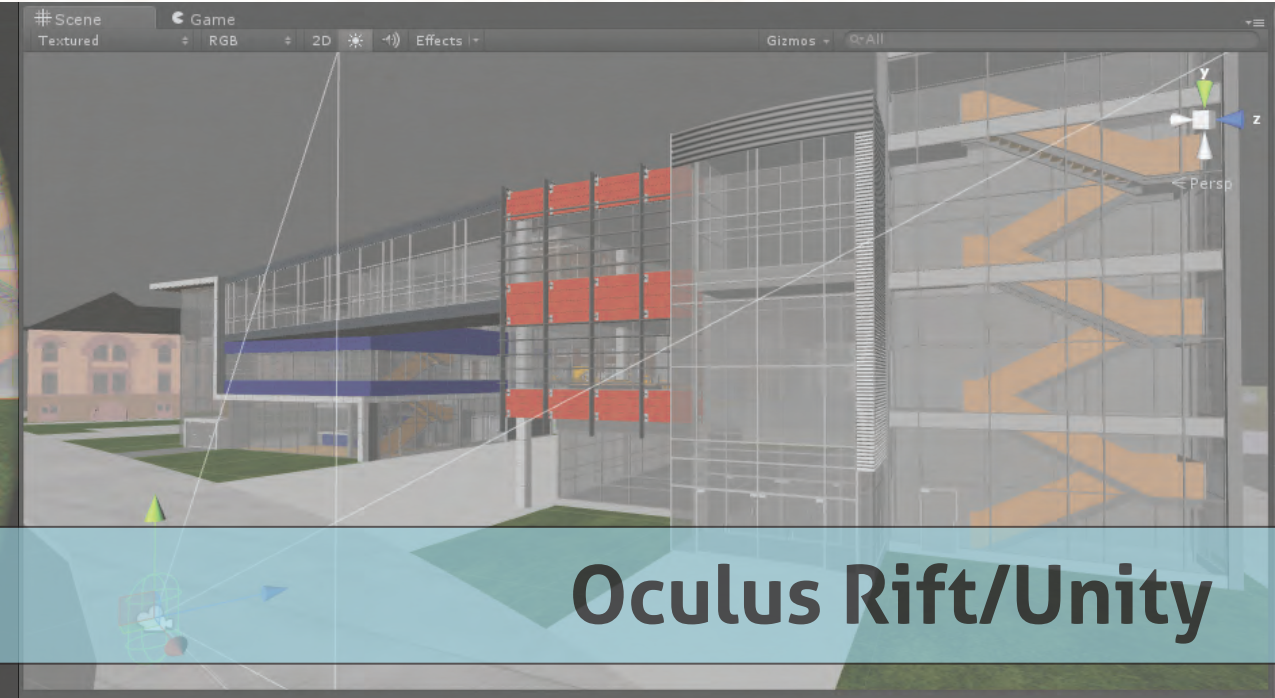
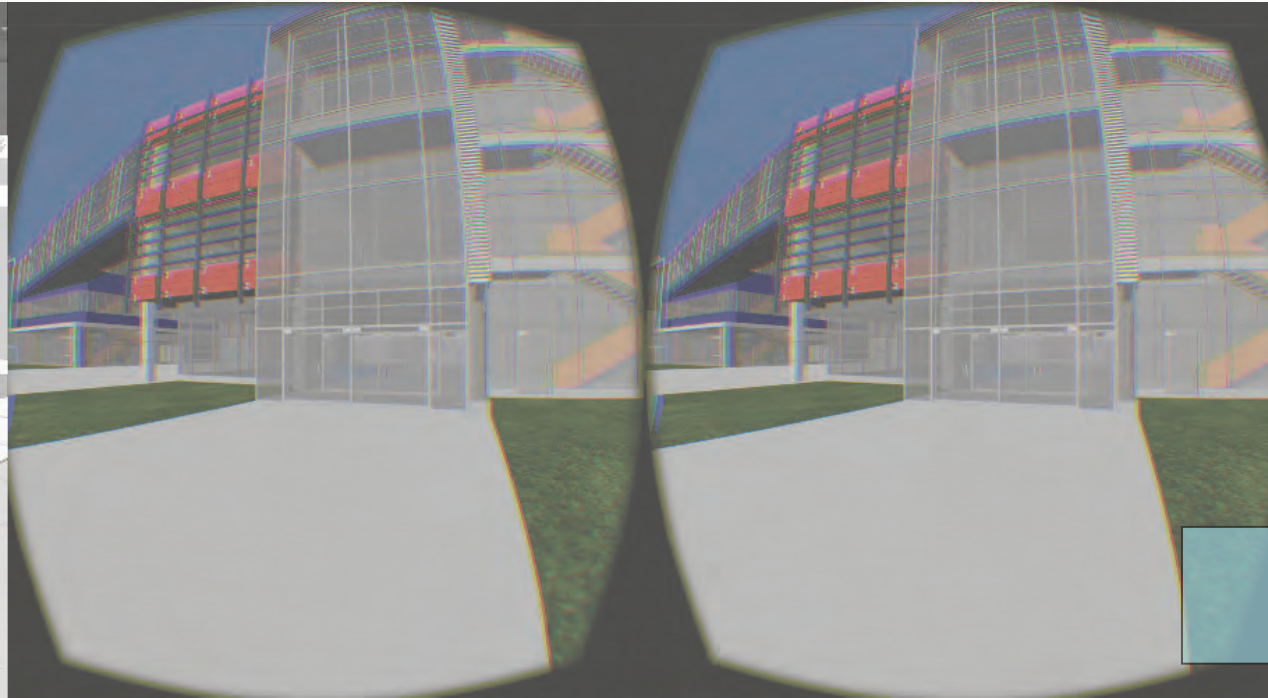


Early Oculus Concept

The Maker Factory uses a structural steel framing system with hollow steel columns and lightweight steel framing. Floor to floor height is 15' with 3' suspended ceilings to allow for structure, HVAC, electrical and plumbing. Each building has a rooftop split-packaged heating/cooling unit and a rooftop cooling tower. The basement houses the building's boilers, sprinkler control, extra storage and electrical equipment. Each floor has a large electrical room to maintain the high levels of technology housed within. The second floor of the south building has a separate ventilation system for both the woodshop and laser cutters that vents to the roof.



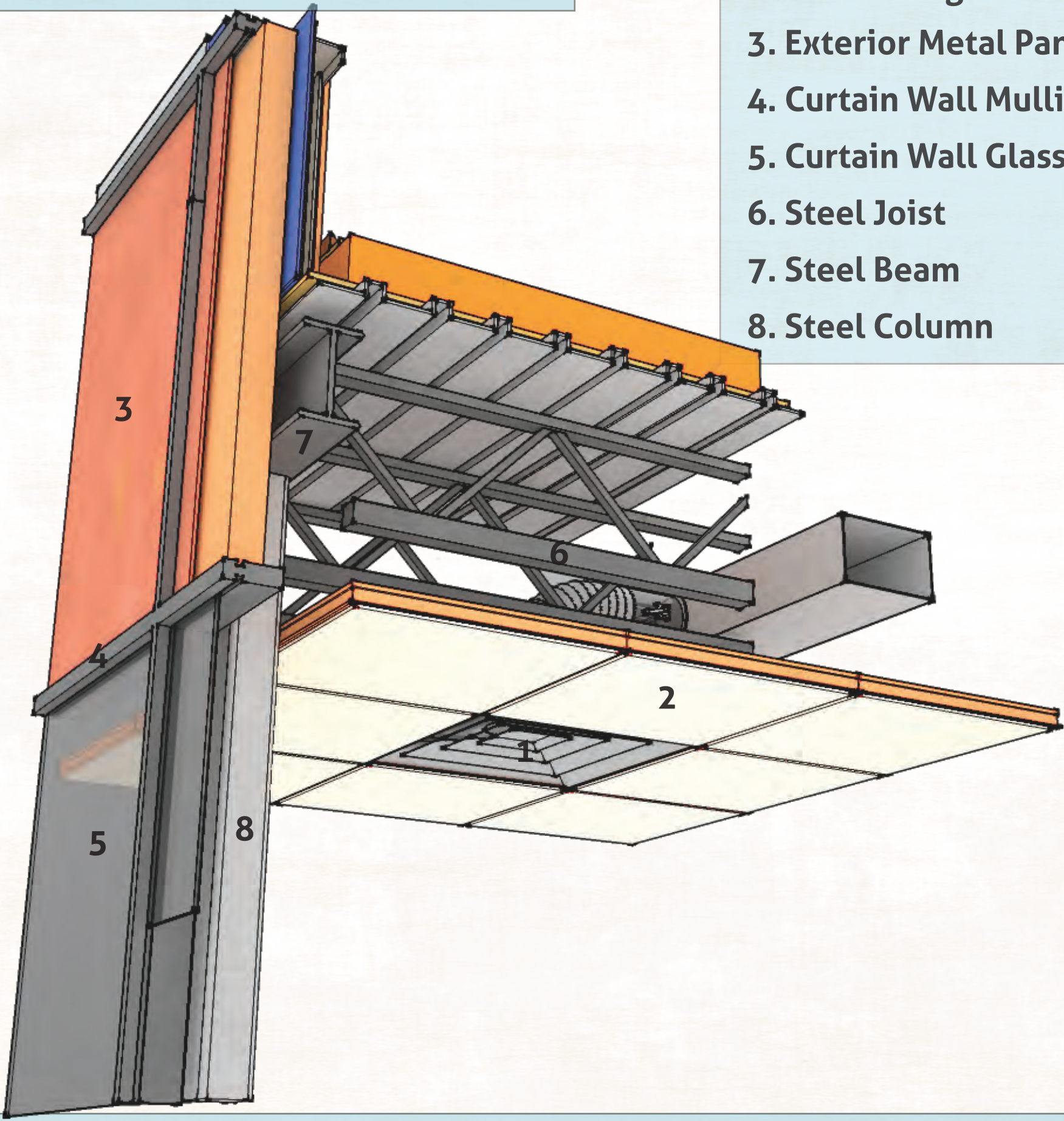
Early Unity Concept



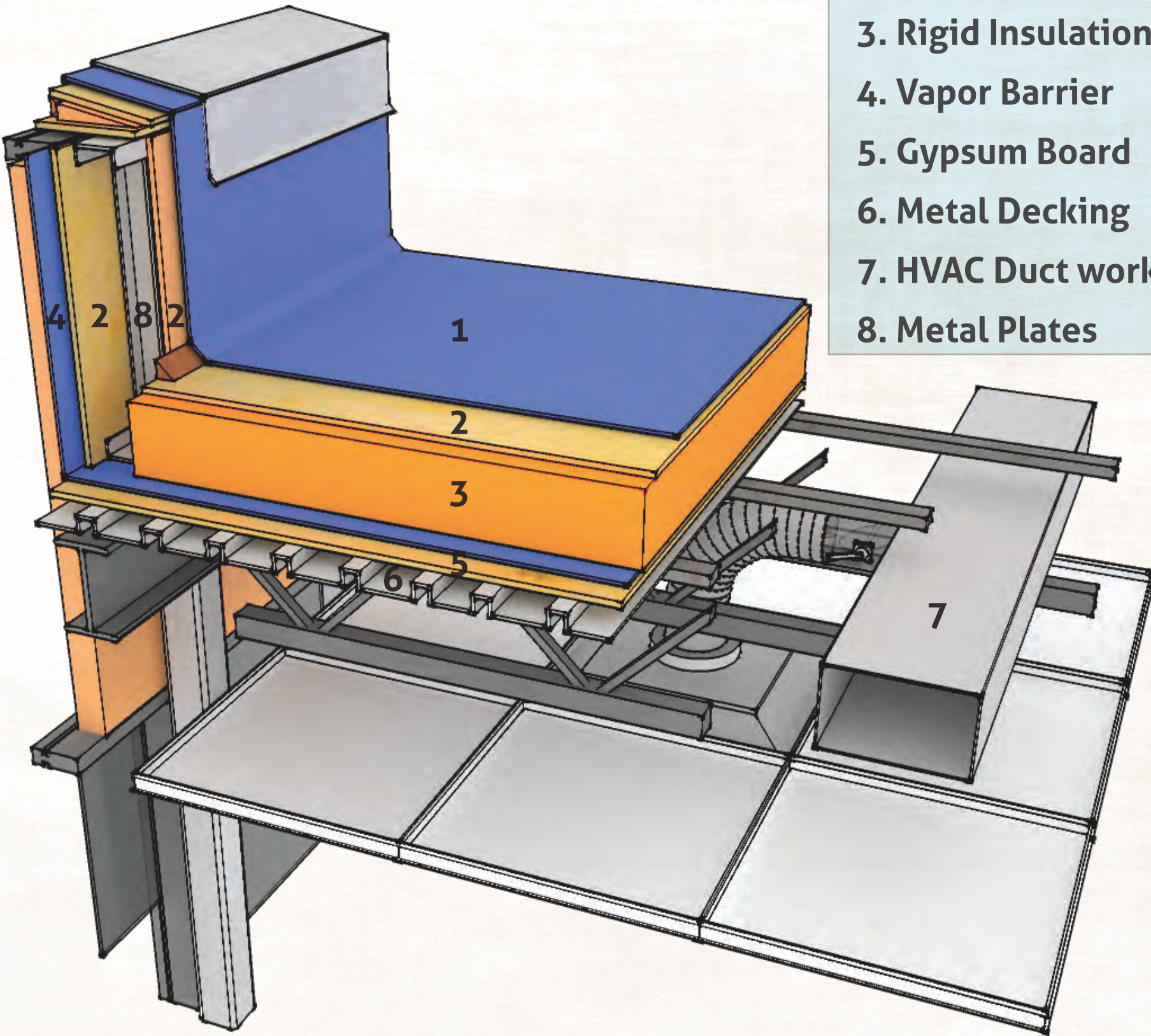
Oculus Rift/Unity

Structure/Process

Structural Detail 1

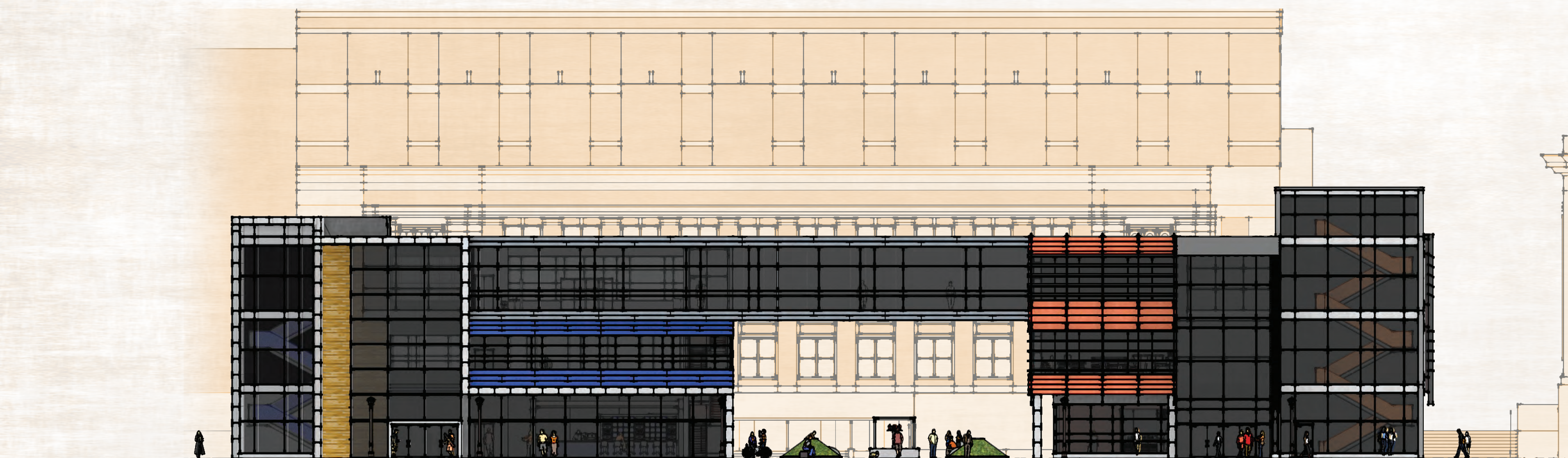


- 1. Diffuser
- 2. ACT Ceiling Tile
- 3. Exterior Metal Panel
- 4. Curtain Wall Mullion
- 5. Curtain Wall Glass
- 6. Steel Joist
- 7. Steel Beam
- 8. Steel Column

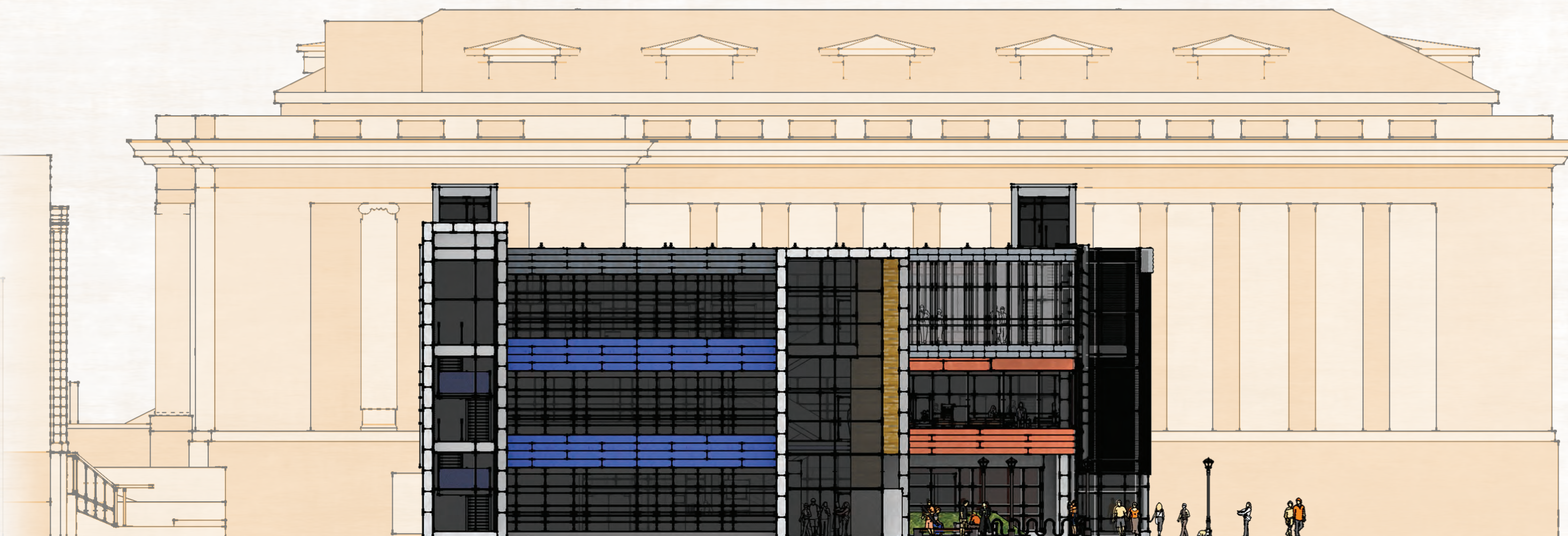


- 1. Roof Membrane
- 2. Plywood Sheathing
- 3. Rigid Insulation
- 4. Vapor Barrier
- 5. Gypsum Board
- 6. Metal Decking
- 7. HVAC Duct work
- 8. Metal Plates

Structural Detail 2



West Elevation
Scale: 1/16" = 1'-0"



North Elevation
Scale: 1/16" = 1'-0"



Section Cut
Scale: 1/16" = 1'-0"

Brian Glur
Mike Christenson
Arch 772 Design Thesis
Autodesk: Revit/AutoCAD, Trimble Sketchup, Unity Pro,
Adobe: Illustrator/Photoshop/InDesign, Maxwell Render 3